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TEXAS INSTRUMENTS INCORPORATED P O BOX 655474, M/S 3999 DALLAS, TX 75265			BANANKHAH, MAJID A	
			ART UNIT	PAPER NUMBER
			2195	

DATE MAILED: 09/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/822,748

Applicant(s)

GARY, SCOTT PAUL

Examiner

Majid A. Banankhah

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 20 June 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-45 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## **Response to Amendment**

Applicant has transferred the limitation of "wherein the program permits the first data processor to set configuration parameters of the second data processor" from claim 3 to the independent claims. Later on, applicant in his remarks on pages 9-13, arguing in substance that neither of the references of TDB, Jones, AAPA, Wisner, Engdahl, Menezes, Brady, Screiber, Nozue, and/or Sitrick describe or suggest the limitation of "the program permitting the first data processor to set configuration parameters of the second data processor". The Examiner disagrees with these arguments. While this limitation is implicitly taught by Weiser as explained on page 8 in the final office action issued on April 18, 2005, the Examiner, uses the reference of Nicolet in order to show this limitation is well known in the art at the time the invention was made. The reference of Nicolet explicitly teaches of this limitation in col. 1, lines 30-38, col. 2, lines 52-62, and col. 67, lines 1-5, for the reason that the developer have access to the system internals of one or more of the remote operating system in order to implement the necessary functionality (See Nicolet, col. 2, lines 35-45).

## **New Grounds of Rejection**

Applicant's remarks have been considered, but are deemed to be moot in view of the new grounds of. New grounds of rejection under *35 U.S.C. §103* are set forth below.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a

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person having ordinary skill in the art to which the subject matter pertains.  
Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 16, 27, 31-33, 35 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over IBM - Technical Disclosure Bulletin, "Remote Procedure Calls for an Attached Processor" Vol. 35, issue 1B, pages 237-238, June 1, 1992 (U.S. Patent ) in view of Jones et al. U.S. Patent Application Publication US 2002/0007389, further in view of Applicant's Admitted Prior Art (see instant specification, page 28, lines 7-13, as discussed above), and further in view of Nicolet (US patent No. 5,671,414, hereinafter Nicolet).

**As per claim 1:**

IBM-TDB discloses the invention substantially as claimed:

IBM-TDB teaches the invention as claimed including a method of using a first data processor (p. 1 line 2, "main processor") to manage resources of a second data processor (p. 1 line 2, "an attached processor") which performs data processing functions that support user applications (p. 1 line 3), comprising:

- the first data processor making a remote procedure call to the second data processor to invoke on the second data processor a program (p. 1 lines 1-2. and 13-16); and
- the second data processor executing the program in response to the remote procedure call (p. 1 lines 24-28).

However, IBM-TDB does not *explicitly* teach the following additional limitations:

**Jones** teaches the use of a program on the second data processor that supports management of data processing resources of the second data processor [e.g, see:

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[0060] FIG. 9 is a flowchart illustrating the steps that are performed when an activity requests a resource reservation for a remote resource. The process begins with a local activity requesting a reservation for a remote resource (step 110 in FIG. 9). This may occur, for instance, when a resource set that contains references to some remote resources (as well as possibly some local resources) is passed a Request Resources() call to the local resource planner. Such sets may result from resource query calls to modules implemented by remote objects or via **remote procedure calls**. The local resource planner receives the request and forwards the request to the remote resource planner for the machine on which the remote resource is found (step 112 in FIG. 9). The remote resource planner processes the request and sends a response back to the local resource planner (step 114 in FIG. 9). The local resource planner receives the response and forwards it to the requesting activity (step 116 in FIG. 9).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to improve upon the system taught by IBM-TDB by implementing the improvements detailed above because it would provide IBM-TDB's system with the enhanced capability of a remote resource planner that supports management of resources on the remote machine [e.g., see Jones, paragraph 0060].

However, IBM-TDB and Jones do not *explicitly* teach the following additional limitations:

APA teaches the executing step includes the second data processor decoding the remote procedure call and calling the program, as claimed.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to improve upon the system taught by IBM-TDB, as modified by Jones, by implementing the improvements detailed above because it would provide the IBM-TDB/ Jones system with the enhanced capability of "a simple function dispatcher" [instant specification, page 28, line 9].

Furthermore, IBM-TDB, in view of Jones, further in view of, AAPA does not clearly explain the limitation of "wherein the program permits the first data processor to set configuration parameters

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of the second data processor". However, the reference of Nicolet teaches of "Developer who wish to develop client software with the ability to load, unload or otherwise configure their remote server applications may do so using a network client and server operating system supporting the calls. For the reason that the developer have access to the system internals of one or more of the remote operating system in order to implement the necessary functionality (See Nicolet, col. 2, lines 35-45). Therefore, it would have been obvious for one ordinary skill in the art at the time the invention was made to improve upon the system taught by IBM-TDB, as modified by Jones, by implementing the improvements detailed above because the developer have access to the system internals of one or more of the remote operating system in order to implement the necessary functionality (See Nicolet, col. 2, lines 35-45).

**As to claim 2:**

IBM-TDB teaches the invention as claimed including the step of making a second data processor (p. 1 lines 15-16), (p. 1 lines 24-28).

**As to claims 16 and 27,** they are rejected for the same reasons as claim 1 above.

**As to claim 31,** IBM-TDB teaches a man/machine interface coupled to the first data processor for permitting communications between the first data processor and a user (e.g. p. 1 lines 13-16, the keyboard and monitor typically attached to the computer system described throughout).

**As to claim 32,** IBM-TDB teaches the man/machine interface includes one of a tactile interface (e.g. the keyboard) and a visual interface (e.g. the monitor).

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**As to claim 33**, IBM-TDB teaches the communication path extends through a data network (as in the typical use of RPC p. 1 lines 6-7).

**As to claim 35**, IBM-TDB teaches the first and second data processors are located remotely from one another (p. 1 line 2 as implied by the typical use of RPC in a networked environment p. 1 lines 6-7).

**As to claim 36**, IBM-TDB teaches that the man/machine interface coupled to the first data processor for permitting communications between the first data processor and a user (e.g. the keyboard and monitor typically attached to the computer system described throughout).

Claims 3, 4, 12, 14, 15, 19, 26, 37, 44 and 45 are rejected under U.S.C. 103(a) as being unpatentable over IBM - Technical Disclosure Bulletin, "Remote Procedure Calls for an Attached Processor" Vol. 35, issue 1B, pages 237-238, June 1, 1992, in view of Jones et al. U.S. Patent Application Publication US 2002/0007389, as applied to claims 1, 16, and 27 above, and further in view of Applicant's Admitted Prior Art (see instant specification, page 28, lines 7-13, as discussed above), and further in view of Weiser (U.S. Patent 5,786,819).

**As to claims 3, 19, and 44**, IBM-TDB, as modified by Jones and APA, does not explicitly disclose the executing step includes the program permitting the first data processor to write to a memory space associated with the second data processor. Weiser discloses the executing step includes the program permitting the first data processor to write to a memory space associated with the second data processor (col. 8 lines 65-67, col. 9), wherein the program permits the first data processor to set configuration parameters of the second data processor [e.g., see "For instance, the

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called procedure may cause the device 90 to have its memory written (write mem 352), memory read (read mem 353), or memory deleted (delete mem 354). Alternatively, the called procedure may establish or reset the definition of a user-defined-function (respectively set func 355 and reset func 356), write text to the display (display text 357), or generate a sequence of tones from the piezo-speaker (tones 358). Other user defined procedure function calls may also be utilized if necessary or desired (Other funcs 351), and additional functions can be added to extend the functionality of decode proc 350 by use of a call to new func 349." and associated discussion col. 8, beginning line 65, discussion cont'd col. 9, lines 1-9] .

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of IBM-TDB and Jones and APA and Weiser because Weiser's step of writing to the memory space of the second processor would provide low overhead data transfer to IBM-TDB'S system.

**As to claims 4 and 45,** Weiser discloses the first data processor downloading a further program to the memory space in conjunction with operation of the first-mentioned program - See col. 9 lines 33-40:

In a typical operating session, after receiving a number of RPC type packets, the device 90 might contain new executable code and data that is loaded into its memory. A "call user function 326" request such as previously discussed will establish one of these pieces of code in such a way that it is called from the processor main-loop. The device 90 can now execute this newly loaded code, which may include features such as sending IR packets to some other device in response to pressing the switches. As previously discussed, the ability to download data and executable applications on demand permits simple updating of data files and lists such as might be needed for an electronic address book. For example, new data can be downloaded into the electronic diary or the data management executable of the electronic diary can itself be changed. This would greatly increase the flexibility of data presentation.

**As to claims 12, 26, and 37,** IBM-TDB does not disclose the executing step includes the program permitting the first data processor to read from a memory space associated with the



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second data processor. Weiser discloses the executing step includes the program permitting the first data processor to read from a memory space associated with the second data processor (col. 8 lines 65-67).

**As to claim 14**, IBM-TDB does not disclose providing the program in a memory space of the second data processor. Weiser discloses providing the program in a memory space of the second data processor (col. 9 lines 1-9).

**As to claim 15**, IBM-TDB does not disclose the providing step includes making a remote procedure call to the second data process to invoke on the second data processor a further program and, in response to the remote procedure call, the second data processor executing the further program to download the first-mentioned program into the memory space of the second data processor. Weiser discloses the providing step includes making a remote procedure call to the second data process to invoke on the second data processor a further program and, in response to the remote procedure call, the second data processor executing the further program to download the first-mentioned program into the memory space of the second data processor (See col. 9 lines 1-9 where the procedure to be executed is called via RPC/RMI; see also the rejection of claims 4 & 45 above).

Claims 5, 6, 20, 21, 38, and 39 are rejected under U.S.C. 103(a) as being unpatentable over IBM - Technical Disclosure Bulletin, "Remote Procedure Calls for an Attached Processor" Vol. 35, issue 1B, pages 237-238, June 1, 1992, in view of Jones et al. U.S. Patent Application Publication US 2002/0007389, as applied to claims 1, 16, and 27 above, and further in view of Applicant's Admitted Prior Art (see instant specification, page 28, lines 7-13,

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as discussed above), and further in view of Engdahl (U.S. Pat. 5,452,42).

**As to claims 5, 20, and 38**, IBM-TDB, as modified by Jones and APA, does not disclose the executing step includes the program providing information indicative of a capability of the second data processor. Engdahl discloses the executing step includes the program providing information indicative of a capability of the second data processor (col. 29 lines 3-7).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of IBM-TDB & Jones & APA with Engdahl because Engdahl's capability information would improve the decision making of IBM-TDB'S system by allowing it to know exactly the capability of the processor in the system.

**As to claims 6, 21, and 39**, Engdahl discloses the capability information includes information indicative of a native character size of the second data processor (col. 29 lines 3-7).

Claims 7, 22, and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over IBM - Technical Disclosure Bulletin, "Remote Procedure Calls for an Attached Processor" Vol. 35, issue 1B, pages 237-238, June 1, 1992 in view of Jones et al. U.S. Patent Application Publication US 2002/0007389, and further in view of Applicant's Admitted Prior Art (see instant specification, page 28, lines 7-13, as discussed above), and further in view of Engdahl (5,452,420) as applied to claims 1, 5, 16, 20, 27, and 38 above, and further in view of Menezes (5,621,894).

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**As to claims 7, 22, and 41**, IBM-TDB, Jones, APA, and Engdahl do not disclose the capability information includes information indicative of an operating system of the second data processor. Menezes discloses the capability information includes information indicative of an operating system of the second data processor (col. 3 lines 1-18).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of IBM-TDB, Jones, APA, Engdahl, and Menezes because Menezes's information about the second data processor's operating system would improve IBM-TDB'S and Engdahl's system by allowing it to know what type of OS is running on the second data processor.

Claims 8, 23, and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over IBM - Technical Disclosure Bulletin, "Remote Procedure Calls for an Attached Processor" Vol. 35, issue 1B, pages 237-238, June 1, 1992 in view of Jones et al. U.S. Patent Application Publication US 2002/0007389, and further in view of Applicant's Admitted Prior Art (see instant specification, page 28, lines 7-13, as discussed above), and further in view of Engdahl (5,452,420) as applied to claims 1, 5, 16, 20, 27, and 38 above, and further in view of Jayakumar (5,904,733).

**As to claims 8, 23, 40** IBM-TDB, Jones, APA and Engdahl do not disclose the capability information includes information that identifies the second data processor.

Jayaktlmar discloses the capability information includes information that identifies the second data processor (col. 6 lines 3-6).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of

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IBM-TDB, Jones, APA, Engdahl, and Jayakumar because being able to uniquely identify processors would allow the first processor to communicate with multiple 2<sup>nd</sup> processors.

**Claims 9, 24, and 42** are rejected under U.S.C. 103(a) as being unpatentable over IBM - Technical Disclosure Bulletin, "Remote Procedure Calls for an Attached Processor" Vol. 35, issue 1B, pages 237-238, June 1, 1992 in view of Jones et al. U.S. Patent Application Publication US 2002/0007389, as applied to claims 1, 16, and 27 above, and further in view of Applicant's Admitted Prior Art (see instant specification, page 28, lines 7-13, as discussed above), and further in view of Brady (5,724,418).

**As to claims 9, 24, and 42**, IBM-TDB & Jones & APA do not disclose the executing step includes the program activating a desired communication protocol for communication between the first and second data processors. Brady discloses the executing step includes the program activating a desired communication protocol for communication between the first and second data processors (col. 7 line 17-23).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of IBM-TDB & Jones & APA with Brady because the communications protocol of Brady would facilitate the exchange of data between the processors of IBM-TDB's system.

Claims 10, 11, 25, and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over IBM - Technical Disclosure Bulletin, "Remote Procedure Calls for an Attached Processor" Vol. 35, issue 1B, pages 237-238, June 1, 1992 in view of Jones et al. U.S. Patent Application Publication US 2002/0007389, as applied to claims 1, 16, and 27 above, and further in view of Applicant's Admitted Prior Art (see instant specification, page 28, lines 7-13,

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as discussed above), and further in view of Schreiber (5,787,281).

**As to claims 10, 25, and 43** IBM-TDB & Jones & APA do not disclose the executing step includes the program changing the runtime priority associated with a data processing function of the second data processor. Schreiber discloses the executing step includes the program changing the runtime priority associated with a data processing function of the second data processor (col. 7 lines 1-5).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of IBM-TDB & Jones & APA with Schreiber because the ability to change the runtime priority would let the system of IBM-TDB manage distributed workloads and allow for remote process management.

As to claim 11, IBM-TDB does not disclose the changing step includes one of pausing and resuming the data processing function. Schreiber discloses the changing step includes one of pausing and resuming the data processing function (col. 7 lines 1-5).

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over IBM - Technical Disclosure Bulletin, "Remote Procedure Calls for an Attached Processor" Vol. 35, issue 1B, pages 237-238, June 1, 1992 in view of Jones et al. U.S. Patent Application Publication US 2002/0007389, as applied to claim 1 above, and further in view of Applicant's Admitted Prior Art (see instant specification, page 28, lines 7-13, as discussed above), and further in view of Nozue (5,890,189).

As to claim 13, IBM-TDB & Jones & APA do not disclose the step of making a remote procedure call includes the first data

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processor providing to the second data processor a remote procedure call command which includes an address that points to a locations of the program in a memory space of the second data processor.

Nozue discloses the step of making a remote procedure call includes the first data processor providing to the second data processor a remote procedure call command which includes an address that points to a location of the program in a memory space of the second data processor (col. 46 lines 27-36).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of IBM-TDB & Jones & APA with Nozue because sending a pointer as taught by Nozue would allow the system of IBM-TDB to call RPC functions by address instead of function name reducing the size of the RPC message.

Claims 17, 18, and 28-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over IBM - Technical Disclosure Bulletin, "Remote Procedure Calls for an Attached Processor" Vol. 35, issue 1B, pages 237-238, June 1, 1992 in view of Jones et al. U.S. Patent Application Publication US 2002/0007389, as applied to claims 16 and 27 above, and further in view of Applicant's Admitted Prior Art (see instant specification, page 28, lines 7-13, as discussed above), and further in view of Sitrick (5,728,960).

**As to claims 17 and 28**, IBM-TDB as modified by Jones & APA does not disclose the apparatus provided as a single integrated circuit chip. Sitrick discloses the apparatus as a single integrated circuit chip (col. 16 lines 63-65).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of IBM-TDB & Jones & APA with Sitlick because packaging the IBM-

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TDB's system as a single integrated circuit would lower its power requirements and footprint.

**As to claim 18**, IBM-TDB does not disclose the integrated circuit chip is one of a microprocessor chip and a digital signal processor chip. Sitrick discloses the integrated circuit chip is one of a microprocessor chip and a digital signal processor chip (col. 16 lines 63-65).

**As to claim 29**, it is rejected for the same reason as claim 36 above.

**As to claim 30**, IBM-TDB does not disclose the first data processor is one of a microprocessor and a digital signal processor, and the second data processor is one of a microprocessor and a digital signal processor. Sitrick discloses the first data processor is one of a microprocessor and a digital signal processor, and the second data processor is one of a microprocessor and a digital signal processor (col. 16 lines 63-65).

Claim 34 is rejected under U.S.C. 103(a) as being unpatentable over IBM - Technical Disclosure Bulletin, "Remote Procedure Calls for an Attached Processor" Vol. 35, issue 1B, pages 237-238, June 1, 1992 in view of Jones et al. U.S. Patent Application Publication US 2002/0007389, and further in view of Applicant's Admitted Prior Art (see instant specification, page 28, lines 7-13, as discussed above).

**As to claim 34**, it is rejected for the same reasons as claim 33 above, however the cited references do not explicitly disclose the data network is the Internet. It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply the method taught by IBM-TDB and Jones where the data network that was used was the Internet because the use of the

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Internet would allow robust communication between processing devices dispersed over large geographical areas.

### **How to Contact the Examiner:**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Maid Banankhah, whose telephone number is 571-272-3770. A voice mail service is also available at this number. The Examiner can normally be reached on Monday - Friday, 7:00 AM - 3:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, An Meng-AI who can be reached on 571-272-3756. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

### **All responses sent by U.S. Mail should be mailed to:**

Commissioner for Patents  
PO Box 1450  
Alexandria, VA 22313-1450

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**PTO CENTRAL FAX NUMBER:  
703-872-9306**



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- Any inquiry of a general nature or relating to the status of this application should be directed to the **TC 2100 Group receptionist: (571) 272-2100.**

MAJID BANANKHAH  
PRIMARY EXAMINER

